98-435420/37 A93 L02 **VINO/ 97.07.28**
VINOGRADOV A A *RU 2103242-C1
97.07.28 97RU-112152 *(98.01.27)* C04B 38/10

Expanded concrete made using magnesia binder - includes activated powdered waste from magnesite firing, nonionic surfactant and methyl:cellulose as foam stabiliser

C98-132203

Addnl. Data: VINOGRADOV A A, VORONIN V N, MYAKISHEV A N

Concrete, including caustic magnesite, magnesium chloride solution, fine- ground ceramic brickwaste (I), foaming agent and foam stabiliser, contains activated powdered waste from magnesite firing (II) as caustic magnesite, nonionic surfactant as foaming agent, and methyl cellulose as foam stabiliser, at ratio (parts per weight): (II) 100, (I) 5-25, magnesium chloride solution 66-144, nonionic surfactant 0.11-1.2, and methyl cellulose 0.11-1.2. (II) is activated by calcining at 400-420°C, or additional milling to specific surface 0.44-0.46 m^2/g. (I) is preferably treated with magnesium chloride solution and has specific surface 0.34-0.35 m^2/g. Magnesium chloride solution has density 1200 kg/m^3, and wallpaper glue can be used as methyl cellulose.

A(3-A4A, 12-R1A) L(2-D3)

USE

In building industry, namely in production of expanded concrete.

CLAIMED

Also claimed is a method of production of expanded concrete, including making foam,preparation of (I) and (II), preparing magnesium chloride solution, mineralising foam, forming articles and leaving to stand. Foam is made by mixing surfactant with methyl cellulose stabiliser, in part of magnesium chloride solution, (I) is mixed with remaining part of magnesium chloride solution and left to stand, (II) is activated as described above, and foam is mineralised by mixing with remaining components, at ratio as quoted above. (II) and (I) are added to foam, in sequence, over 2-3 minutes, with constant mixing, and expanded concrete is obtained in mixer-foam generator used to make foam. Foam is made using 1/6-1/3 of total volume of magnesium chloride solution, and the latter is mixed with (I) at ratio (parts per wt.): (I) 100, magnesium chloride solution 11-13 and water 19-21, and left at 105-120°C to constant weight. Density of concrete is regulated by adjusting foaml ing or by changing ratio of magnesium

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chloride solution used in foam-making and mixing with (I) and (II). After 7 days formed articles are immersed in water for 1-3 days and dried at 120°C. (SN) (10pp2269DwgNo.0/0)	RU 2103242-C